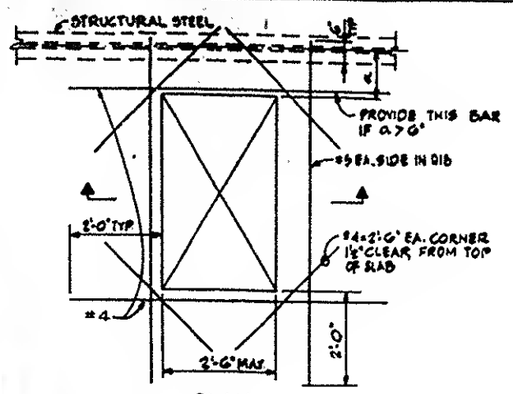
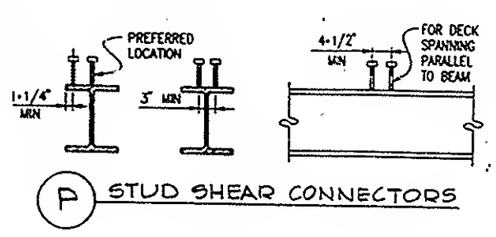


UNFRAMED OPENING OR SLEEVE THROUGH SLAB ON STEEL DECK

FOR DETAILS OF ADDITIONAL BARS AT REBAR GRIDS SEE Ⓜ. SIZE AND LOCATION OF OPENINGS NOT SHOWN IN STRUCTURAL DRAWINGS SHALL BE SUBMITTED THROUGH THE ARCHITECT TO THE STRUCTURAL ENGINEER FOR REVIEW.

Ⓝ SLAB/DECK

1. WHERE DECK SPANS PERPENDICULAR TO BEAMS, THE SHEAR CONNECTORS SHALL BE PLACED IN VALLEYS WITH A MAXIMUM OF 2 SHEAR CONNECTORS PER VALLEY, UNLESS OTHERWISE NOTED. SHEAR CONNECTORS SHALL BE KEPT CLEAR OF DECK ENDS, SEAMS, AND EMBOSSMENTS. SHEAR CONNECTORS SHALL NOT BE PLACED UNDER OR WITHIN 3" OF TRENCH HEADERS OR ELEVATORS SHEAVE BEAMS.
2. WHERE A SINGLE NUMBER IS INDICATED [ ] IN PLAN, THE NUMBER OF SHEAR CONNECTORS SHALL BE DISTRIBUTED UNIFORMLY ALONG THE LENGTH OF THE BEAM, UNLESS OTHERWISE NOTED.
3. WHERE A SINGLE NUMBER IS INDICATED [ ] IN PLAN AND THE EXTENT IS DESIGNATED BY ARROWS, THE NUMBER OF SHEAR CONNECTORS SHALL BE DISTRIBUTED UNIFORMLY ALONG THE DESIGNATED LENGTH.
4. WHERE [MIN] IS INDICATED IN PLAN, PROVIDE SHEAR CONNECTORS AT 24" O.C.
5. UNIFORM SPACING ON BEAMS WITH DECK SPANNING PERPENDICULAR SHALL BE ACHIEVED AS FOLLOWS:
   - WHERE THE NUMBER OF SHEAR CONNECTORS IS LESS THAN THE NUMBER OF VALLEYS, INTERMIX 12" AND 24" SPACING.
   - WHERE THE NUMBER OF SHEAR CONNECTORS IS GREATER THAN THE NUMBER OF VALLEYS, INTERMIX ONE SHEAR CONNECTOR PER VALLEY WITH TWO SHEAR CONNECTORS PER VALLEY APPLICATION, WITH A MAXIMUM SPACING OF 12" O.C.



Ⓟ STUD SHEAR CONNECTORS

SUPPORTS EACH END

SECTION A-A

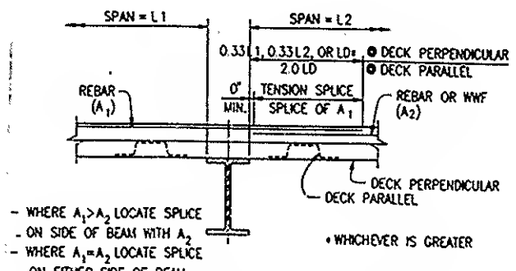
EDGE CONDITION

E	TOP BARS
TO 7'	NOT REQUIRED
OVER 7' TO 2'-0	#3 @ 12
OVER 2'-0 TO 3'-6	#4 @ 12
OVER 3'-6 TO 4'-0	#4 @ 6

CANTILEVER

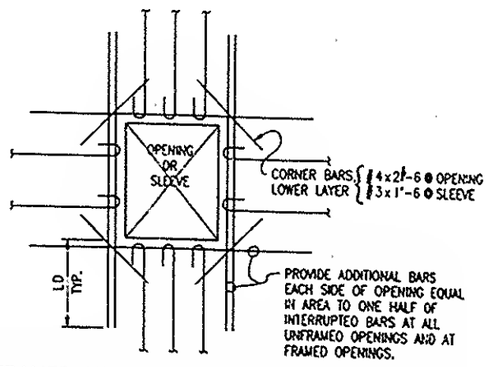
NOTES:
1. BEND OVER WWF. FOR REBAR GRID PROVIDE STANDARD HOOK.
2. WHERE GRID REBARS ARE EQUAL TO OR GREATER IN AREA PER FOOT THAN REQUIRED TOP BARS, TOP BARS MAY BE OMITTED.
3. FOR LOCATION SEE PLAN. IF NOT NOTED IN PLAN OR SECTION, EDGE OF SLAB IS FLUSH WITH EDGE OF FLANGE.

Ⓚ SLAB/DECK



SPLICING REINFORCEMENT IN REBAR GRID

Ⓛ SLAB/DECK



FRAMED AND UNFRAMED OPENING OR SLEEVE THROUGH SLAB ON STEEL DECK WITH REBAR GRID

FOR BOTTOM BAR ARRANGEMENT SEE Ⓝ.

SIZE AND LOCATION OF OPENINGS NOT SHOWN IN STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.

Ⓜ SLAB/DECK

REFER TO Ⓑ FOR INFORMATION NOT SHOWN

a-a

Ⓕ CONNECTION OF BEAM TO TS COLUMN

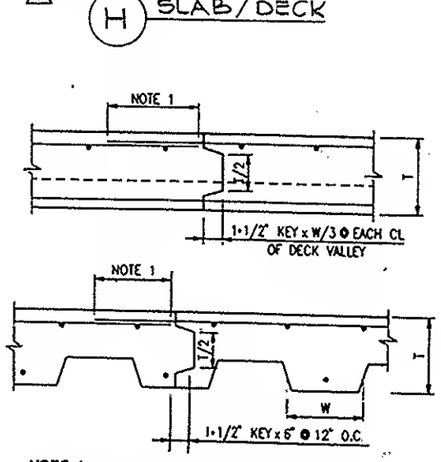
1. For extent of slab/deck type, see plans and details. For description of slab/deck type, see schedule and details.
2. For spans with supports at both ends, provide deck proportioned compositely to sustain the superimposed load indicated in schedule, except that, for spans including trench headers, provide deck proportioned non-compositely.

   Provide deck proportioned also to satisfy the following criteria for function as a form:
   A. Dead load deflection limited to 1/180 of span or .75 in., whichever is smaller.
   B. Steel stress limited to not more than 26700 psi for dead load plus 200 lb. concentrated load at midspan or, steel stress limited to not more than 20000 psi for dead load plus 20 psf additional load, whichever is more severe.
3. For deck supporting cantilevers, provide deck proportioned to satisfy the following criteria for function as a form:
   A. Dead load deflection limited to 1/90 of overhang or .375 in., whichever is smaller.
   B. Steel stress limited to not more than 26700 psi for dead load plus 200 lb. concentrated load at outside end of overhang or, steel stress limited to not more than 20000 psi for dead load plus 20 psf additional load, whichever is more severe.
4. NW indicates normal weight aggregate concrete. LW indicates lightweight aggregate concrete.
5. Provide additional concrete as required to compensate for deflections of beams and of steel deck.

Ⓖ SLAB/STEEL DECK

TYPE	DECK DEPTH (IN.)	SLAB DEPTH (IN.)	SLAB AGGREGATE	SUPERIMPOSED LOAD (PSF)	REINFORCING: WWF OR REBAR GRID	REINFORCING: BOTTOM BARS	REMARKS
D1	2	4	LW	200	#4 @ 7 (N-S) #4 @ 9 (E-W)		BULKHEAD
D2	2	4½	LW	200	6x6 W2.0x2.0		FUEL OIL TANK ROOM ROOF
D3	1½	4	LW	200	6x6 W2.0x2.0		MISC

Ⓗ SLAB/DECK



NOTE 1.
TENSION SPLICE IN REBAR GRID ONLY WHERE ACCEPTED BY STRUCTURAL ENGINEER. STAGGER SPLICE.

CONSTRUCTION JOINT

Ⓙ SLAB/DECK

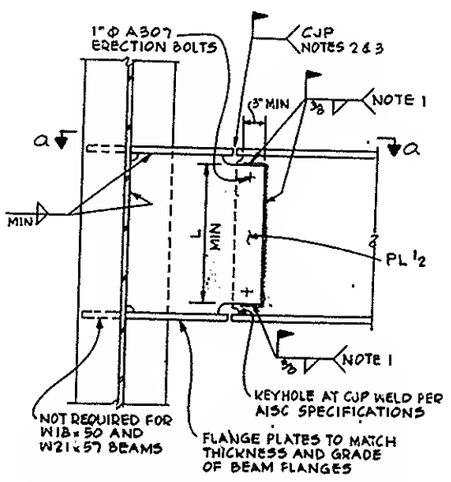
BEAM - COLUMN MOMENT CONNECTION

a-a

TABLE	
BEAM SIZE	L
W27x84	18.
W27x84 FY50	21
W18x50	12
W18x60 FY50	12
W21x57	14

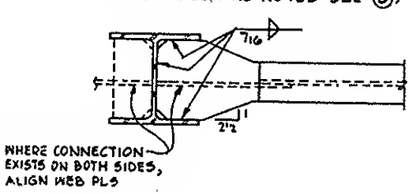
NOTES:
1. REFER TO TABLE FOR WELD LENGTH.
2. WELD FROM BOTH SIDES. WHERE BACKING BAR IS USED REMOVE BAR, BACK GOUGE, WELD FLUSH AND ADD A 5/16" REINFORCING FILLET WELD.
3. USE RUN-ON AND RUN-OFF TABS. REMOVE TABS AFTER WELDING AND FINISH TO SMOOTH CONTOURS PER 3.12.3 OF AWS D1.1-94.

Ⓓ CONNECTIONS



BEAM-COLUMN MOMENT CONNECTION

FOR TABLE AND NOTES SEE Ⓓ.



a-a

Ⓔ CONNECTIONS